CATALYTIC OXIDATION APPARATUS

Patent number: JP55056823

Publication date: 1980-04-26

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Classification:

- international: ***B01J8/04; B01J12/00; B01J19/24; B01J35/04; F01N3/20; F01N3/28; F28D9/00;*** **B01J8/04; B01J12/00; B01J19/24; B01J35/00; F01N3/20; F01N3/28; F28D9/00;** (IPC1-7): B01D53/36

- european: B01J8/04; B01J12/00P; B01J19/24R2; B01J35/04; F01N3/20B2; F01N3/28B4B; F01N3/28D; F01N3/28D6; F28D9/00K

Application number: JP19780129217 19781019

Priority number(s): JP19780129217 19781019

Also published as:

DE2942359 (A1)

Abstract of **JP55056823**

PURPOSE:To improve greatly heat recovery rate of a catalytic oxidation apparatus by placing in shell a heat exchange structure and catalyst forming gas passages passing across each other at right angles every step consisting of corrugated sheets, etc. and arranging them in such a manner that introducing gas exchanges heat for exhaust gas. CONSTITUTION:Honeycomb catalyst structure C (an oxidation catalyst is deposited on part of passage) has gas passage passing across each other at right angles every step consistng flat sheets 1, 1 such as asbestos paper and corrugated sheets 2, 2. The honeycomb catalyst structure C and heat exchange structure E are placed in parallel within a shell 10 having a gas introducing port 8 and an exhaust port 9. Isolation walls 11a, 11a', 11b, 11b' are provided so that gas to be treated from the inlet 8 is not mixed with each other between going way (a, b, c) and return way (d, e, f). Heat required for reaction is supllied by a heater 13. As reactor and heat exchanger are combined, heat recovery rate is improved. As the surface area of catalyst is increased, the oxidation reactivity is improved.